

WASTE MANAGEMENT PLAN

***Slug Catcher Maintenance Incident
Bayou Black Natural Gas Dehydration/Condensate Stabilization,
Handling and Terminaling Facility
4700 Bayou Black Drive
Gibson, Terrebonne Parish, Louisiana***

Agency Interest No. 32991

CB&I Project No.: 155417

***Revision 0
October 2015***

Prepared for:



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1.0 INTRODUCTION / SITE OVERVIEW

On the morning of Thursday, October 8, 2015, The Williams Companies, Inc. (Williams) personnel reported a fire while conducting planned maintenance activities on the slug catcher at the Transcontinental Gas Pipe Line Company, LLC (Transco) Bayou Black Natural Gas Dehydration/Condensate Stabilization, Handling and Terminating Facility (Site). A site location map is included as **Figure 1**. The resulting fire was extinguished using water and fire-fighting foam. The water and foam mixture, along with residual amounts of pipeline sludge pooled in a topographically low area near the incident location.

Site waste management activities are expected to include:

- Pumping, staging, characterization and disposal of the fire-fighting water and foam mixture;
- Removal, staging, characterization and disposal of any free standing residual pipeline sludge at the exposed lower header of the slug catcher;
- Following fluid removal and site assessment, removal of potentially impacted soils

This waste management plan was requested by the Louisiana Department of Environmental Quality (LDEQ) and presents plans for the characterization and disposal of fluids and solids generated as a result of this incident. A site layout map of the Site is presented as **Figure 2**.



2.0 WATER MANAGEMENT PLAN

2.1 On-Site Management

An undetermined volume of water and firefighting foam was used to extinguish the fire during the October 8, 2015 incident. The fluids pooled in a topographically low area near the source of the fire. The liquids will be pumped into frac tanks that will be staged at the Site and stored until the waste has been characterized for subsequent disposal. One frac tank will be used to contain the fluids that drained from the slug catcher into troughs and the fluids that pooled in the immediate area. This material may contain some pipeline sludge material, along with the firewater/foam mixture. A second frac tank will be used to contain water pumped from outfall locations 003 and 004, which were closed following the incident and received a portion of the firewater/foam mixture runoff. Outfall locations 003 and 004 will remain closed until the incident area is assessed for potential impact. The proposed staging area for the frac tanks is shown on **Figure 2**, along with the locations of outfall 003 and 004. The frac tank staging area location is subject to change.

The delivery of the frac tanks and subsequent pumping of the fluids to the frac tanks is taking place at the same time that this Waste Management Plan is being developed; therefore, information presented in this plan is based on available information at the time of this writing.

In the event of significant precipitation resulting in accumulations of rainwater in the vicinity of the slug catcher and/or the containment area formed by the closure of outfalls 003 and 004, the accumulated rainwater/runoff will be collected and placed in the on-site frac tank and disposed of accordingly as per this waste management plan.

2.2 Water Characterization

Representative samples of the fluids will be collected from the frac tanks in laboratory supplied containers, transported under chain-of-custody, and submitted for laboratory analyses for waste characterization parameters.

Each sample will be analyzed for waste characterization parameters for disposal. Samples will be analyzed for corrosivity (pH), ignitability (flashpoint), and reactivity (cyanide, sulfide), as well as total petroleum hydrocarbons- gasoline range organics (TPH-GRO), TPH-diesel range organics (TPH-DRO), and TPH-oil range organics (TPH-GRO) by EPA Method 8015. The samples will also be analyzed for Toxicity Characteristic Leaching Procedure (TCLP) – benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 1312/8260 and TCLP - Resource Conservation and Recovery Act (RCRA) metals (arsenic,

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barium, cadmium, chromium, lead, mercury, selenium, and silver) by EPA Method 1312/6020/7470. The samples will be submitted to a Louisiana Environmental Laboratory Accreditation Program (LELAP)-certified laboratory for analysis.

The waste characterization analyses will be used to determine the appropriate disposal facility capable of handling the waste. Following characterization, waste profile(s) will be prepared in accordance with the requirements of the selected disposal facility. The waste profile will be prepared by Williams or their contractor and will be signed by an authorized Williams representative.

2.3 Water Handling

Williams will be responsible for scheduling and coordination, handling, re-handling, loading, transporting, and transfer of all stored waters. A portion of this work may be performed by a Williams' contractor. All appropriate and applicable best management practices (BMPs) will be followed including: use of secondary containment during fluid transfer operations, use of two person crews, and wearing of appropriate personal protective equipment (PPE). All trucks will be checked for leaks or drips and will receive prior approval prior to movement.

2.4 Water Loading and Transportation

A vacuum truck will be used to remove the water from the frac tanks for transport to the disposal/recycling facility. The selected transporter will be fully licensed and insured to transfer the stored water from the Site to an LDEQ-approved disposal/recycling facility. Final disposition will depend upon characterization results.

The transporter will be responsible for ensuring that each truck's gross weight meets DOT requirements and the requirements of the receiving facility. Once the fluids have been removed, the frac tanks will be properly cleaned by the frac tank rental company and removed from the Site. Each load of fluids removed from the Site will have the proper shipping documents including a waste manifest that will accompany each truck shipment. All waste manifests will be signed by an authorized Williams representative.

2.5 Water Disposal

The fluids will be transported to the selected disposal facility that is LDEQ approved and capable of handling the waste based on the profile. Completed manifests will be returned to Williams.



3.0 SOIL MANAGEMENT

3.1 On-Site Management

Currently, the solid waste associated with the incident consists of free standing residual pipeline sludge at the exposed lower header of slug catcher. The accessible pipeline sludge will be removed and placed in a lined roll-off box which will be staged near the incident scene (see **Figure 2**). The roll-off box staging area is subject to change.

3.2 Soil Characterization

A composite sample of the pipeline sludge will be collected in laboratory supplied containers and submitted under chain-of-custody for laboratory analyses for waste characterization parameters. Likewise, a composite sample of the soil waste generated during the site investigation will be collected and submitted for analysis of waste characterization parameters following those activities. If it is determined that soil excavation is necessary, the waste characterization from the site investigation will be used for disposal of excavated soils.

The composite pipeline sludge sample submitted for waste characterization will be analyzed for corrosivity, ignitability, reactivity, TPH-GRO, TPH-DRO, TPH-ORO by EPA Method 8015, as well as TCLP – BTEX by EPA Method 1312/8260 and TCLP- RCRA metals by EPA Method 1312/6020/7470. The samples will be submitted to a LELAP-certified laboratory for analysis.

The waste characterization analyses will be used to determine the appropriate disposal facility capable of handling the pipeline sludge. Following characterization, a waste profile will be prepared in accordance with the requirements of the selected disposal facility. The waste profile will be prepared by Williams or their contractor and will be signed by and authorized Williams representative.

3.3 Soil Loading

Accessible pipeline sludge material recovered at the exposed lower header of the slug catcher and the immediate vicinity of the incident will be stored in a lined, roll-off container which will be staged near the slug catcher (staging location subject to change). Final disposition will depend upon characterization results.

The roll-off container will be picked up by a transporter to transfer the pipeline sludge from the Site to an LDEQ-approved disposal facility. Once loaded, the truck will move from the loading area to an adjacent staging area where the load(s) will be covered and trucks cleaned of debris

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that might fall from the trucks during transport. If loose material is encountered a broom and/or shovel will be utilized to remove the material and place in the roll-off. Paperwork will be checked at this point prior to mobilization to the disposal facility. Drums, if used, will be loaded onto a truck by a hydraulic liftgate and properly secured prior to transport to the disposal facility. No trucks will be moved from the Site without prior approval.

3.4 *Soil Transportation*

The selected transporter will be fully licensed and insured to transport the pipeline sludge material to the disposal facility. The pipeline sludge will be trucked directly to the disposal facility. Final disposition will depend upon characterization results. The transporter will be responsible for ensuring that each truck's gross weight meets DOT requirements and the requirements of the receiving facility. Each load of pipeline sludge will have the proper shipping documents including a waste manifest that will accompany each truck shipment. All waste manifests will be signed by an authorized Williams representative.

3.5 *Soil Disposal*

The pipeline sludge will be transported to an LDEQ-approved landfill capable of accepting the waste based on the profile. The disposal facility will likely be Waste Management's Woodside Landfill in Walker or Louisiana, Colonial Landfill in Sorrento, Louisiana, or R360 in Houma, Louisiana. Completed manifests will be returned to Williams.



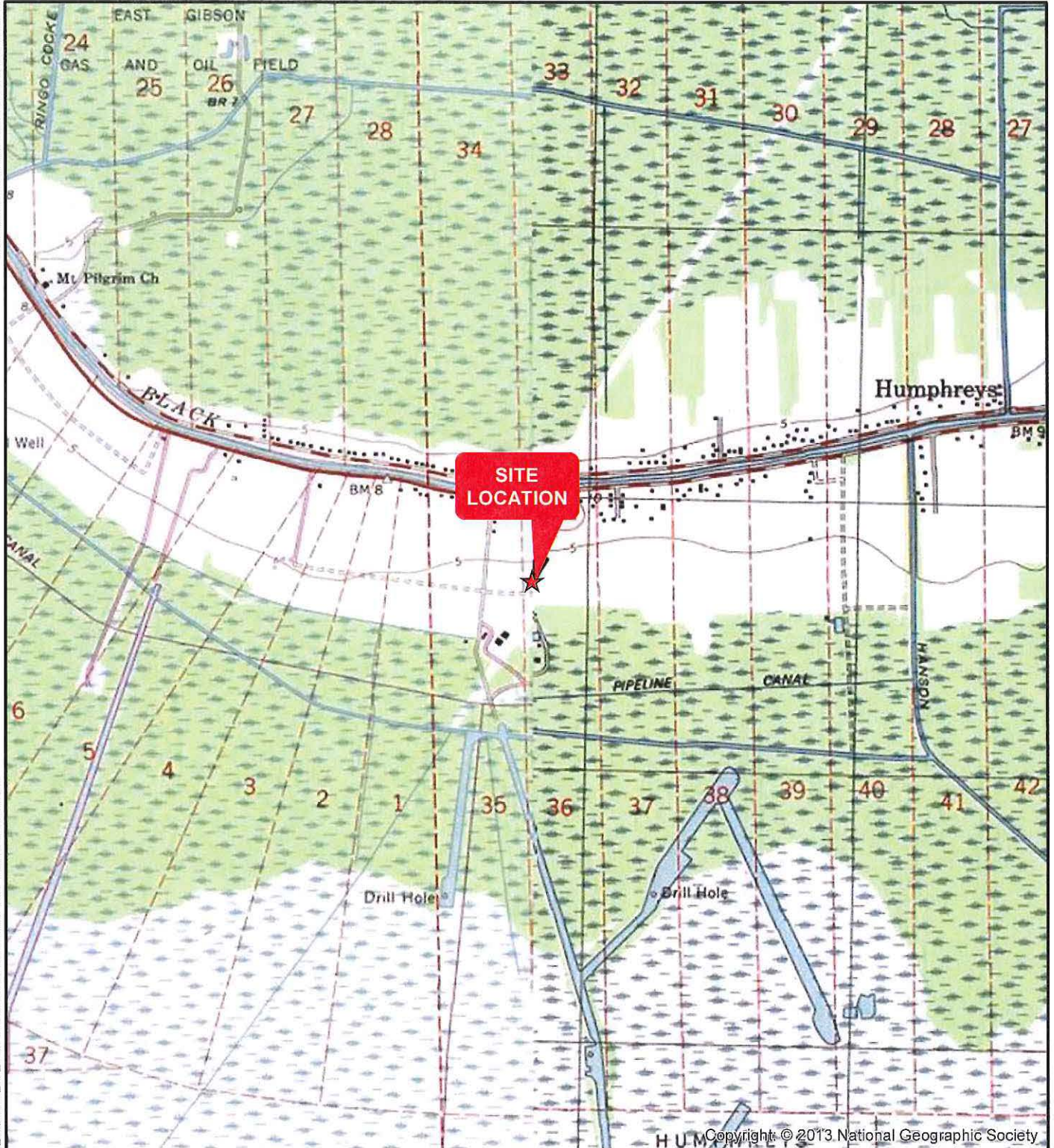
4.0 HEALTH AND SAFETY

4.1 Safety Considerations

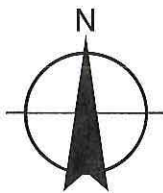
Preliminary safety considerations associated with waste management activities presented in this Waste Management Plan have been identified and include:

- Verifying all ignition sources. (Mitigation: Utilize a calibrated gas detector)
 - Ensure hoses/transfer equipment are in good condition. (Mitigation: Conduct visual inspection)
 - Potential for leaks. (Mitigation: Utilize secondary containment for frac tanks and transfer points, conduct visual inspections)
 - Static Electricity. (Mitigation: Attach bonding cable to truck, ground temporary storage containers)
 - Pressure buildup in frac tank. (Mitigation: Ensure each tank has pressure relief capabilities)
 - Overhead and lateral clearance for transport vehicles. (Mitigation: Utilize a spotter when moving trucks/equipment in/out of the facility)
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FIGURES



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2,000 1,000 0 2,000
Feet

TRANSCONTINENTAL GAS PIPE
LINE COMPANY, LLC
HOUSTON, TEXAS

WASTE MANAGEMENT PLAN, BAYOU BLACK
NATURAL GAS DEHYDRATION/CONDENSATE STABILIZATION,
HANDLING, AND TERMINALING FACILITY, GIBSON, LOUISIANA

FIGURE
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1

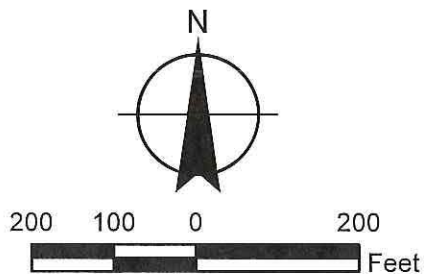
SITE LOCATION MAP



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NOTE:
* Location subject to change



TRANSCONTINENTAL GAS PIPE
LINE COMPANY, LLC
HOUSTON, TEXAS

WASTE MANAGEMENT PLAN, BAYOU BLACK
NATURAL GAS DEHYDRATION/CONDENSATE STABILIZATION,
HANDLING, AND TERMINALING FACILITY, GIBSON, LOUISIANA

FIGURE
NUMBER

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SITE LAYOUT MAP



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